ON THE GENUS *EPIRRITA*, THE NOVEMBER MOTHS (LEPIDOPTERA: GEOMETRIDAE), IN BERNWOOD FOREST ON THE OXON/BUCKS BORDER.

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THE three species of this genus which occur in southern England, namely the November moth, *Epirrita dilutata* D. & S., the Pale November moth, *E. christyi* Allen and the Autumnal moth, *E. autumnata* Borth, are difficult to separate when examining light trap catches in the field because of superficial similarities, so I collected a series of about 50 at the above site, mainly during the 1984 season, for later examination. I also reared a few of the *Epirrita* larvae that I beat from various trees and shrubs to see how the choice of host plants compared with the other work on the subject, which is summarised in Haggett (1981). Among the set specimens I was able to assign some of the more clearly marked specimens to *E. dilutata* and others to *E. autumnata* using the wing characteristics given in Skinner (1984) and Skou (1986), but I was left with a large number of undetermined specimens and no definite *E. christyi*. The apparent absence of *E. christyi* from the series was of interest as the species does not appear in the local lists for the Oxford district (Bretherton 1940; Bretherton 1941, Emmet 1948) although *E. christyi* was recognised as a distinct species three decades earlier (Allen 1906). In addition it appears that no previous workers have reported *E. christyi* in Bernwood though both *E. dilutata* and *E. autumnata* have been recorded regularly since the 1930s and '40s (Waring, in prep.).

Recently I took my full series of specimens to Adrian Riley who identifies the light trap catches for the nation-wide Rothamsted Insect Survey and who has examined and dissected a great many specimens of this genus. Using both wing characteristics and other features such as the spurs on the octavals (Heslop-Harrison, 1933), he finds that the series contains twenty two *E. dilutata,* twenty-four *E. autumnata* and two *E. christyi*. Of the specimens of *E. dilutata* seventeen were taken between 9 October and 12 November 1984 and the numbers are distributed throughout this period. Two specimens were added to the collection in 1985 and a further three were reared from larvae. Ten of the *E. autumnata* were reared from larvae, the other fourteen were caught as adults between 9 October and 12 November 1984. All but the first of these adults occurred after 29 October so the earlier specimens were predominantly *E. dilutata,* though both species were equally common over the 1984 season as a whole.

Of the two *E. christyi,* one was taken on 22 October 1984 and the other was reared from a larva beaten from hazel on 6 May 1985, so *E. christyi* is breeding in Bernwood.

Birch was the only host-plant from which I recorded *E. autumnata* and

these were collected from the birch regrowth that is now common along the edges of the rides in Bernwood. Heslop-Harrison (1933) and Skinner (1984) suggest that birch and alder (both of which are members of the Betulaceae) are the main host-plants of *E. autumnata*. Heslop-Harrison observed that *E. autumnata* "prefers a much more open situation than *E. dilutata* and hence is much more likely to be encountered on trees marshalled in linear fashion along upland streams, . . . in moorland clefts . . . along mill-races and so on." He only found it in one really dense wood in his study area, which was Northumberland and Durham. The Bernwood situation, with lines of rideside birch regrowth on the margins of young conifer plantations, has similarities with some of the habitats Heslop-Harrison describes.

The three specimens of *E. dilutata* that I reared were collected from hazel. I also recorded larvae which I considered to be typically *E. dilutata* from oak and hawthorn in the same places. These particular larvae were bright velvety-green (as noted by Haggett 1981), unmarked with red and with a prominent yellow lateral stripe around the posterior segments.

I am not clear why *E. christyi* is so poorly represented in my sample. Harper (1980) found it commonly in woodland in his study area in Herefordshire, where it occurred on birch, hawthorn and hazel as well as blackthorn, beech and wych elm. Birch, hawthorn and hazel are the three most abundant understorey species in Bernwood and my study area included mature birch as well as regrowth.The blackthorn thickets are well-known, but beech is localised to one plantation and a few scattered specimens. Wych elm (*Ulmus glabra*) is un-recorded, though English elm (*Ulmus procera*) is a minor component (Woodell, unpubl.). Heslop-Harrison (1933) considered that in Northumberland and Durham *E. christyi* was dependent on the presence of wych elm. Although he found larvae on sallow, hazel and honeysuckle, they were never found on these plants in sites where wych elm was absent and wych elm provided over 85% of the larvae that were beaten. Wych elm was also a feature of the woodland site studied by Harper (1980) in Hereford though *E. christyi* occurred in smaller numbers at three other sites. Perhaps the absence of wych elm from Bernwood is a factor contributing to the apparent rarity of *E. christyi* there. I would be glad to hear of sites where *E. christyi* is common and wych elm and beech are absent, provided that voucher specimens of *E. christyi* exist which can be examined. Clearly these moths are an interesting as well as a difficult genus.

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(Note: a first draft of the above is available for comments and addenda.)

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A note on two Tortricinae (Lep.) at Charlton, S.E. London

I have been somewhat surprised at the recent appearance here of *Argyrotaenia ljungiana* Thunb. (= *pulchellana* Haw.), an inhabitant of heathland. The first three came to my m.v. lamp on the night of 5.viii.88, and many (in some variety) on that of 22.vii.89. I had not previously met with it anywhere, nor does this area seem at all suitable to it; there is no wild heather or ling and nothing today, of a truly heathy character. However, there is a small ericetum of recent standing in Charlton Park, so I am much inclined to think that *ljungiana* must have been introduced into the locality with some of the plants. Sokoloff (*Ent. Rec.* **98**: 254-255) records breeding this species from the fruits of *Vitis vinifer* collected from a garden in Battersea, London which may provide an alternative explanation for its occurrence in Charlton. Lt. Col. Emmet kindly named the moth for me.

I should perhaps also mention that *Epiphyas postvittana* Walk. has rapidly become so numerous here as to be, on many nights, the most